RAW SEQUENCE LISTING
ERROR REPORT
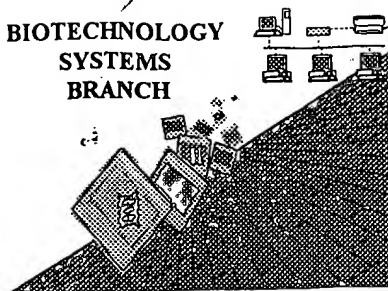
The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _09/084,691A_

Source: _OIPE_

Date Processed by STIC: _6/25/2001_

RECEIVED

JUL 2 7 2001

TECH CENTER 1600/2900

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER VERSION 3.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.
Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).
Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

<u>Checker Version 3.0 can be down loaded from the USPTO website at the following address:</u>
http://www.uspto.gov/web/offices/pac/checker

Raw Sequence Listing Error Summary

ERROR DETECTED   SUGGESTED CORRECTION   SERIAL NUMBER: 09/084,691A

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ___ Wrapped Nucleics   The number/text at the end of each line "wrapped" down to the next line. This may occur if your file
  Wrapped Aminos   was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will
  prevent "wrapping."

2 ___ Invalid Line Length   The rules require that a line not exceed 72 characters in length. This includes white spaces.

3 ___ Misaligned Amino   The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers;
  Numbering   use space characters, instead.

4 ___ Non-ASCII   The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please
  ensure your subsequent submission is saved in ASCII text.

5 ___ Variable Length   Sequence(s) ___ contain n's or Xaa's representing more than one residue. Per Sequence Rules,
  each n or Xaa can only represent a single residue. Please present the maximum number of each
  residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 ___ PatentIn 2.0   A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid
  "bug"   sequences(s) ___. Normally, PatentIn would automatically generate this section from the
  previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to
  the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for
  Artificial or Unknown sequences.

7 ___ Skipped Sequences   Sequence(s) ___ missing. If intentional, please insert the following lines for each skipped sequence:
  (OLD RULES)   (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
  (i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
  (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
  This sequence is intentionally skipped

  Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8 ___ Skipped Sequences   Sequence(s) ___ missing. If intentional, please insert the following lines for each skipped sequence.
  (NEW RULES)   <210> sequence id number
  <400> sequence id number
  000

9 ___ Use of n's or Xaa's   Use of n's and/or Xaa's have been detected in the Sequence Listing.
  (NEW RULES)   Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
  In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 ___ Invalid <213>   Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or
  Response   scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or
  is Artificial Sequence

11 ___ Use of <220>   Sequence(s) ___ missing the <220> "Feature" and associated numeric identifiers and responses.
  Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or
  "Unknown." Please explain source of genetic material in <220> to <223> section.
  (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

12 ___ PatentIn 2.0   Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file,
  "bug"   resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence
  listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

AMC – Biotechnology Systems Branch – 06/04/2001

OIPE

RAW SEQUENCE LISTING   DATE: 06/25/2001
PATENT APPLICATION: **US/09/084,691A** TIME: 11:43:36

pp 1-4

Does Not Comply
Corrected Diskette Needed

Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

```
 3 <110> APPLICANT: Bukh, J.
 4        Miller, R.H.
 5        Purcell, R.H.
 7 <120> TITLE OF INVENTION: Nucleotide and Deduced Amino Acid Sequences of the
 8        Envelope 1 and Core Genes of Isolates of Hepatitis C
 9        Virus and the use of Reagents Derived From These
10        Sequences in Diagnostic Methods and Vaccines
12 <130> FILE REFERENCE: 20264116US2
14 <140> CURRENT APPLICATION NUMBER: 09/084,691A
15 <141> CURRENT FILING DATE: 1998-05-26
17 <150> PRIOR APPLICATION NUMBER: 08/290,665
18 <151> PRIOR FILING DATE: 1994-08-15
20 <150> PRIOR APPLICATION NUMBER: 08/086,428
21 <151> PRIOR FILING DATE: 1993-06-29
23 <160> NUMBER OF SEQ ID NOS: 274
25 <170> SOFTWARE: PatentIn Ver. 2.1
```

ERRORED SEQUENCES

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     7373 <210> SEQ ID NO: 240
     7374 <211> LENGTH: 33
     7375 <212> TYPE: PRT
     7376 <213> ORGANISM: Homo sapiens
     7378 <400> SEQUENCE: 240
     7379 Trp Ile Gln Val Thr Pro Asn Val Ala Val Lys His Arg Gly Ala Leu
     7380   1           5              10              15
E--> 7382 Thr His Asn Leu Arg Xaa His Xaa Asp Xaa Ile Val Met Ala Ala Thr
     7383         20              25              30
     7385 Val
     7405 <210> SEQ ID NO: 242
     7406 <211> LENGTH: 33
     7407 <212> TYPE: PRT
     7408 <213> ORGANISM: Homo sapiens
     7410 <400> SEQUENCE: 242
E--> 7411 Trp Ile Pro Val Xaa Pro Asn Val Ala Val Xaa Xaa Pro Gly Ala Leu
     7412   1           5              10              15
     7414 Thr Gln Gly Leu Arg Thr His Ile Asp Met Val Val Met Ser Ala Thr
     7415         20              25              30
     7417 Leu
     7421 <210> SEQ ID NO: 243
     7422 <211> LENGTH: 33
     7423 <212> TYPE: PRT
     7424 <213> ORGANISM: Homo sapiens
     7426 <400> SEQUENCE: 243
E--> 7427 Trp Thr Xaa Val Thr Pro Thr Val Ala Val Arg Tyr Val Gly Ala Thr
     7428   1           5              10              15
```

see item 9 on Even summary sheet

item 9

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RAW SEQUENCE LISTING   DATE: 06/25/2001
PATENT APPLICATION: US/09/084,691A   TIME: 11:43:37

Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

```
      7430 Thr Ala Ser Ile Arg Ser His Val Asp Leu Leu Val Gly Ala Ala Thr
      7431       20              25              30
E--> 7433 Xaa
      7437 <210> SEQ ID NO: 244
      7438 <211> LENGTH: 33
      7439 <212> TYPE: PRT
      7440 <213> ORGANISM: Homo sapiens
      7442 <400> SEQUENCE: 244
E--> 7443 Trp Val Ala Leu Xaa Pro Thr Leu Ala Ala Arg Asn Xaa Xaa Xaa Xaa
      7444   1               5              10              15
E--> 7446 Thr Xaa Xaa Ile Arg Xaa His Val Asp Leu Leu Val Gly Ala Ala Xaa
      7447       20              25              30
      7449 Phe
      7453 <210> SEQ ID NO: 245
      7454 <211> LENGTH: 33
      7455 <212> TYPE: PRT
      7456 <213> ORGANISM: Homo sapiens
      7458 <400> SEQUENCE: 245
E--> 7459 Trp Val Xaa Xaa Xaa Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro
      7460   1               5              10              15
E--> 7462 Xaa Xaa Gln Leu Arg Arg Xaa Ile Asp Leu Leu Val Gly Ser Ala Thr
      7463       20              25              30
      7465 Leu
      7485 <210> SEQ ID NO: 247
      7486 <211> LENGTH: 33
      7487 <212> TYPE: PRT
      7488 <213> ORGANISM: Homo sapiens
      7490 <400> SEQUENCE: 247
E--> 7491 Trp Val Ala Leu Thr Pro Thr Val Ala Xaa Xaa Tyr Ile Gly Ala Pro
      7492   1               5              10              15
E--> 7494 Leu Xaa Ser Xaa Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr
      7495       20              25              30
      7497 Val
      7533 <210> SEQ ID NO: 250
      7534 <211> LENGTH: 33
      7535 <212> TYPE: PRT
      7536 <213> ORGANISM: Homo sapiens
      7538 <400> SEQUENCE: 250
E--> 7539 Trp Val Xaa Ile Thr Pro Thr Leu Ser Ala Pro Xaa Xaa Gly Ala Val
      7540   1               5              10              15
E--> 7542 Thr Ala Pro Leu Arg Arg Xaa Val Asp Tyr Leu Ala Gly Gly Ala Ala
      7543       20              25              30
      7545 Leu
      7565 <210> SEQ ID NO: 252
      7566 <211> LENGTH: 23
      7567 <212> TYPE: PRT
      7568 <213> ORGANISM: Homo sapiens
      7570 <400> SEQUENCE: 252
E--> 7571 Thr Leu Thr Met Ile Leu Ala Tyr Ala Ala Arg Val Pro Glu Leu Xaa
```

RAW SEQUENCE LISTING   DATE: 06/25/2001
PATENT APPLICATION: US/09/084,691A   TIME: 11:43:37

Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

```
       7572   1            5                10                15
E--> 7574 Leu Xaa Val Val Phe Gly Gly
       7575              20
       7591 <210> SEQ ID NO: 254
       7592 <211> LENGTH: 23
       7593 <212> TYPE: PRT
       7594 <213> ORGANISM: Homo sapiens
       7596 <400> SEQUENCE: 254
E--> 7597 Thr Xaa Thr Xaa Ile Leu Ala Tyr Xaa Met Arg Val Pro Glu Val Ile
       7598   1            5                10                15
E--> 7600 Xaa Asp Ile Xaa Xaa Gly Ala
       7601              20
       7604 <210> SEQ ID NO: 255
       7605 <211> LENGTH: 23
       7606 <212> TYPE: PRT
       7607 <213> ORGANISM: Homo sapiens
       7609 <400> SEQUENCE: 255
E--> 7610 Ala Val Gly Met Val Val Ala His Xaa Leu Arg Leu Pro Gln Thr Xaa
       7611   1            5                10                15
E--> 7613 Phe Asp Ile Xaa Ala Gly Ala
       7614              20
       7617 <210> SEQ ID NO: 256
       7618 <211> LENGTH: 23
       7619 <212> TYPE: PRT
       7620 <213> ORGANISM: Homo sapiens
       7622 <400> SEQUENCE: 256
E--> 7623 Thr Xaa Ala Leu Val Xaa Ser Gln Leu Leu Arg Xaa Pro Gln Ala Xaa
       7624   1            5                10                15
E--> 7626 Xaa Asp Xaa Val Xaa Gly Ala
       7627              20
       7630 <210> SEQ ID NO: 257
       7631 <211> LENGTH: 23
       7632 <212> TYPE: PRT
       7633 <213> ORGANISM: Homo sapiens
       7635 <400> SEQUENCE: 257
E--> 7636 Thr Xaa Ala Leu Val Xaa Ala Gln Leu Leu Arg Xaa Pro Gln Ala Xaa
       7637   1            5                10                15
       7639 Leu Asp Met Ile Ala Gly Ala
       7640              20
       7656 <210> SEQ ID NO: 259
       7657 <211> LENGTH: 23
       7658 <212> TYPE: PRT
       7659 <213> ORGANISM: Homo sapiens
       7661 <400> SEQUENCE: 259
E--> 7662 Thr Thr Thr Leu Xaa Leu Ala Gln Val Met Arg Ile Pro Ser Thr Leu
       7663   1            5                10                15
E--> 7665 Val Asp Leu Leu Xaa Gly Gly
       7666              20
       7695 <210> SEQ ID NO: 262
```

RAW SEQUENCE LISTING   DATE: 06/25/2001
PATENT APPLICATION: US/09/084,691A   TIME: 11:43:37

Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

```
     7696 <211> LENGTH: 23
     7697 <212> TYPE: PRT
     7698 <213> ORGANISM: Homo sapiens
     7700 <400> SEQUENCE: 262
E--> 7701 Xaa Thr Ala Leu Xaa Met Ala Gln Xaa Leu Arg Ile Pro Gln Val Val
     7702  1             5                   10                  15
E--> 7704 Ile Asp Ile Ile Ala Gly Xaa
     7705               20
```

Item 9

FJI

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220> to
<223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY   DATE: 06/25/2001
PATENT APPLICATION: **US/09/084,691A**   TIME: 11:43:38

Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

```
L:7382 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:240
L:7411 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:242
L:7427 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:243
M:340 Repeated in SeqNo=243
L:7443 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:244
M:340 Repeated in SeqNo=244
L:7459 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:245
M:340 Repeated in SeqNo=245
L:7491 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:247
M:340 Repeated in SeqNo=247
L:7539 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:250
M:340 Repeated in SeqNo=250
L:7571 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:252
M:340 Repeated in SeqNo=252
L:7597 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:254
M:340 Repeated in SeqNo=254
L:7610 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:255
M:340 Repeated in SeqNo=255
L:7623 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:256
M:340 Repeated in SeqNo=256
L:7636 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:257
L:7662 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:259
M:340 Repeated in SeqNo=259
L:7701 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:262
M:340 Repeated in SeqNo=262
L:7741 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:264
L:7870 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7882 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7885 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7888 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7894 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7897 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7900 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7903 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:8013 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8022 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8025 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8028 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8031 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8037 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8043 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8046 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8111 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8135 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
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VERIFICATION SUMMARY
DATE: 06/25/2001
PATENT APPLICATION: **US/09/084,691A**
TIME: 11:43:38

Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

```
L:8144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8200 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8203 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8206 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8227 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8371 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8374 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8392 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:270
L:8448 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:270
L:8529 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8532 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8535 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8547 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8550 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8553 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
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